

Appl. No. 10/087,473 (Docket 090/003)  
Amdt. dated May 10, 2006  
Reply to Office Action of February 10, 2006

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

What is claimed as the invention is:

1. *(Currently amended)* A method for producing a population of cells comprising neurons that express tyrosine hydroxylase, the method comprising:
  - ba) plating and culturing undifferentiated human embryonic stem cells on a solid surface so that they differentiate without forming embryoid bodies;
  - eb) culturing the plated cells in a medium containing ~~a TGF- $\beta$  Superfamily Antagonist~~ noggin and/or follistatin; and
  - ec) harvesting a population of cells from the solid surface, wherein the population of cells comprise neurons that express tyrosine hydroxylase.
2. - 3. *(Canceled)*
4. *(Previously presented)* The method of claim 1, wherein the hES cells are plated on a solid surface without any extracellular matrix.
5. *(Previously presented)* The method of claim 1, wherein the solid surface comprises a polycation.
6. *(Previously presented)* The method of claim 5, wherein the polycation is polyornithine or polylysine.
7. - 30. *(Canceled)*
31. *(Previously presented)* The method of claim 1, wherein the medium contains a neurotrophin.
32. *(Previously presented)* The method of claim 31 wherein the neurotrophin is neurotrophin 3 (NT-3) or brain derived neurotrophic factor (BDNF).